

How to clean up smoke and soot from a fire



Smoke and soot can travel and penetrate into other rooms affecting paint, carpet, upholstery, drapes, clothing and any other belongings. Ventilation of the fire scene or debris removal is an effective first step to clean up after fire. Thorough cleaning and neutralizing of both the deposits and odors are required prior to any redecoration.

How to start-----Cleaning techniques

The different types of fire will require different cleaning techniques. Typically, high oxygen fires will result in dry dusty soot, whereas slow-burning, low oxygen fires will result in greasy wet deposits which easily smear. The cleaning regimen must take into account these variations. The following methods are recommendations and guidelines:

- Wear gloves such as household dish washing gloves, long sleeved shirts and pants to avoid skin contact. If you get any ash on your skin, wash it off as soon as possible.
- Wear personal protective gear such as a dust mask to avoid breathing in ash and other airborne particles.
- Ventilate the area (open windows, etc.) to remove soot and odor.
- Remove burned debris to reduce odor source.
- Install dehumidifiers to control moisture in the air (relative humidity), especially where water was used to extinguish the fire.
- Wipe all metallic finishes with cooking oil to prevent rust and staining.
- Clean plastic or surfaces such as PVC windows and white painted surfaces using a mild alkali detergent to remove possible acidic soot which may activate with moisture in the air (humidity) and cause permanent staining.
- Undertake triage assessments to clean or remove all contents as quickly as possible and in order of value.
- Deodorants should not be used as they mask odor which is a significant indicator of health concerns.
- Where surface staining cannot be removed you may consider the use of specialist paint to obliterate the stain and anti bleed characteristics are essential. Typically these paints are lacquers or oil based.
- Damage due to high oxygen fires: Use dry sponges to remove initial deposits and follow with a low alkali detergent and rinse.
- Damage due to low oxygen fires: Do not use a dry sponge as this may create smears and cause the soot to spread. High alkali detergents are recommended with warm water and wash down. Remember to rinse thoroughly as residue may effect following paint applications.

- Damage due to kitchen fires: Thorough detailed cleaning is required as residue may not be readily visible. Remember that usually kitchen cabinets and drawer contents will need to be removed to allow access to hidden areas.
- Cleaning of heavy residue: This may require assistance from professionals and may require mechanical cleaning. Cleaning methods include:
 - ✓ Low pressure sand blasting
 - ✓ sodium bicarbonate blasting
 - ✓ dry ice blasting
 - ✓ power washing with steam
 - ✓ chemical application and agitation
 - ✓ Non-destructive rubber blasting.
- Cleaning techniques for curtains & upholstery: If soot has been deposited it will be necessary to deal with it before cleaning and odor relief. Soot is oil and as much as possible should be removed with a powerful vacuum. Do not use any upright vacuum or any machine or attachment using brushes or beater bars on sooty fabrics as they will force soot into your other possessions making them much more difficult to clean. Hold the vacuum nozzle slightly above the surface and let the vacuum do the work in lifting soot from the surface. Remember to cover any cleaned possessions immediately after cleaning with clean sheets to prevent resoiling during your other clean-up efforts.
- Carpet: Recommend utilizing rotary scrubber or an extraction machine from a rental outlet or supermarkets or hire a professional carpet cleaner.
- Clothes & bedding: Smoke odors can remain in fabrics for a very long time until all of the unburned chemicals have been removed. Many of them are invisible to the eye. Recommend soaking overnight with detergent and wash normal. For items that can be bleached add laundry bleach as normal during the wash cycle.
- Hard materials-Porous (Painted surfaces, wallboard, plaster, wall paper, exposed wood): If soot is present on porous surfaces we recommend the use of a dry chemical sponge to remove as much soot as possible. This step can prevent soil being transferred deep into the surface where it may show as a permanent stain.
- Hard materials-less porous: Use sponge, towel or mop with household cleaning detergent to clean tile, counter tops, sealed wood, glass, metal, appliances, and vinyl wall paper.

Safety tips during restoration

- ❖ Do not use electrical appliances that have been close to a fire before having them checked out.
- ❖ Do not use ceiling fixtures if the ceiling is wet.
- ❖ Do not touch anything during your first inspection to prevent transferring soot from item to item.
- ❖ Do not wash drapes or other materials that may require dry cleaning.
- ❖ Do not hesitate to seek professional help in restoration effort.



Healthy Home